

INTERMEDIATE FREQUENCY TRANSPONDED  
PAYLOAD IMPLEMENTATION

ABSTRACT OF THE DISCLOSURE

A multi-beam satellite has an input section to receive uplink spot beams in a first range of frequencies and an output section to transmit downlink spot beams in a second range of frequencies. An IF section is coupled between the first antenna and second antenna. It down-converts the uplink spot beams in the first range of frequencies to intermediate signals in an intermediate range of frequencies, flexibly and selectively switches and filters the intermediate signals in the intermediate range of frequencies, and up-converts the intermediate signals in the intermediate range of frequencies to the downlink spot beams in the second range of frequencies.